Atty Docket No. 16869P-019900US

PTO FAX NO.: 703-746-4000

ATTENTION: Issue Fee Branch
EXAMINER: Stephen W. Jackson
PTO PHONE NO.: 703-308-2137

Group Art Unit 2836

OFFICIAL COMMUNICATION

FOR THE PERSONAL ATTENTION OF

ISSUE FEE BRANCH

CERTIFICATION OF FACSIMILE TRANSMISSION

I hereby certify that the following documents in re Application of Naoki Maru , Application No. 09/800,760, filed March 6, 2001 for D. C. POWER SUPPLY CIRCUIT AND ELECTRONIC APPARATUS USING SUCH CIRCUITS are being facsimile transmitted to the Patent and Trademark Office on the date shown below.

Documents Attached

1. Transmittal-1 Page
2. Amendment After Allowance Under 37 C.F.R. 1.312(a)-10 Pages

Number of pages being transmitted, including this page: 12

Dated: September 24, 2004

Andrea S. Beck

PLEASE CONFIRM RECEIPT OF THIS PAPER BY RETURN FACSIMILE AT (650) 326-2422

TOWNSEND and TOWNSEND and CREW LLP
Two Embarcadero Center, Eighth Floor
San Francisco, CA 94111-3834
Telephone: 650-326-2400
Fax: 650-326-2422

60317250 v1

PTO/SB/21 (04-04)

TRANSMITTAL FORM

(to be used for all correspondence after initial filing)

Total Number of Pages in This Submission: 11

Application Number	09/800,760
Filing Date	March 6, 2001
First Named Inventor	Maru, Naoki
Art Unit	2836
Examiner Name	Stephen W. Jackson
Attorney Docket Number	16869P-019900US

ENCLOSURES *(Check all that apply)*

- ☐ Fee Transmittal Form
  - ☐ Fee Attached
- ☒ Amendment/Reply
  - ☐ After Final
  - ☐ Affidavits/declaration(s)
- ☐ Extension of Time Request
- ☐ Express Abandonment Request
- ☐ Information Disclosure Statement
- ☐ Certified Copy of Priority Document(s)
- ☐ Response to Missing Parts/ Incomplete Application
  - ☐ Response to Missing Parts under 37 CFR 1.52 or 1.53
- ☐ Drawing(s)
- ☐ Licensing-related Papers
- ☐ Petition
- ☐ Petition to Convert to a Provisional Application
- ☐ Power of Attorney, Revocation Change of Correspondence Address
- ☐ Terminal Disclaimer
- ☐ Request for Refund
- ☐ CD, Number of CD(s) _____
- ☐ After Allowance Communication to Technology Center (TC)
- ☐ Appeal Communication to Board of Appeals and Interferences
- ☐ Appeal Communication to TC (Appeal Notice, Brief, Reply Brief)
- ☐ Proprietary Information
- ☐ Status Letter
- ☐ Other Enclosure(s) (please identify below):

Return Postcard

Remarks The Commissioner is authorized to charge any additional fees to Deposit Account 20-1430.

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm or Individual name	Townsend and Townsend and Crew LLP
	Tyrome Y. Brown Reg. No. 46,580
Signature	
Date	September 24, 2004

CERTIFICATE OF TRANSMISSION/MAILING

I hereby certify that this correspondence is being facsimile transmitted to the Patent and Trademark Office, Fax No. (703) 746-4000 on September 24, 2004.

Typed or printed name	Andrea S. Beck		
Signature		Date	September 24, 2004

60317244 v1

PATENT
Attorney Docket No.: 16869P-019900US
Client Ref. No.: 34990147IUS1

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

Naoki Maru, et al.

Application No.: 09/800,760

Filed: March 6, 2001

For: D. C. POWER SUPPLY CIRCUIT AND ELECTRONIC APPARATUS USING SUCH CIRCUITS

Customer No.: 20350

Confirmation No. 3891

Examiner: Stephen W. Jackson

Technology Center/Art Unit: 2836

AMENDMENT AFTER ALLOWANCE UNDER 37 CFR § 1.312(a)

Mail Stop Issue Fee
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

In response to the Notice of Allowance mailed June 28, 2004, please amend the above-identified application as follows:

Amendments to the Claims are reflected in the listing of claims which begins on page 2 of this paper.

Remarks/Arguments begin on page 10 of this paper.

Amendment to the Claims:

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

1. (Previously presented) A method for supplying a load voltage to a load, comprising:

supplying said load voltage from a D.C. power supply coupled to said load, wherein said D.C. power supply asserts a first value when an internal voltage is above a predetermined voltage, asserts a second value when said load voltage is above a reference voltage; and stops output of said load voltage, when said first value and said second value are asserted; and

supplying said load voltage from another D.C. power supply coupled to said load, so that said load voltage continues to be supplied even if said D.C. power supply stops output of said load voltage.

2. (Original) A D.C. power supply system with overvoltage protection for supplying power to a load, comprising a plurality of D.C. power supply circuits connected in parallel, said plurality of D.C. power supply circuits comprising:

a first D.C. power supply circuit of said plurality of D.C. power supply circuits comprising:

a first overvoltage detection circuit for detecting if a voltage internal to said first D.C. power supply circuit exceeds a first predetermined voltage;

a second overvoltage detection circuit for detecting if a first output of said first D.C. power supply circuit exceeds a first reference voltage, wherein said first output is connected to said load; and

a first control circuit for shutting off said first D.C. power supply circuit, when said first overvoltage detecting circuit detects exceeding of said predetermined voltage and said second overvoltage detecting circuit detects exceeding of said reference voltage; and

a second D.C. power supply circuit of said plurality of D.C. power supply circuits for continuing to supply power to said load, when said first D.C. power supply circuit is shut off due to overvoltage.

3. (Previously Presented) A D.C. power supply circuit for obtaining a D.C. output by filtering signals that are pulse width-modulated and rectified, said filtering using a filter, said D.C. power supply comprising:

a first overvoltage detecting circuit for detecting any surpassing of a first reference voltage by filtering an input of said filter;

a second overvoltage detecting circuit for detecting any surpassing of a second reference voltage by filtering an output of said filter; and

a logic circuit for asserting an overvoltage output when said first overvoltage detecting circuit detects surpassing of said first reference voltage and second overvoltage detecting circuit detects surpassing of said second reference voltage, wherein:

said D.C. output is stopped, when said overvoltage output is asserted.

4. (Currently Amended) The D.C. power supply of claim ~~3wherein~~ 3 wherein said filter is a low pass filter.

5. (Original) A D.C. power supply circuit for obtaining a D.C. output by filtering signals that are pulse width-modulated and rectified, said filtering using a filtering circuit, said D.C. power supply comprising:

a diode coupled at an anode side to said filtering circuit and at a cathode side to a load; filtering

a first overvoltage detecting circuit for detecting any surpassing of a first reference voltage by said anode side voltage of said diode;

a second overvoltage detecting circuit for detecting any surpassing of a second reference voltage by said cathode side voltage of said diode; and

a logic circuit for asserting an overvoltage output when said first overvoltage detecting circuit detects surpassing of said first reference voltage and second overvoltage detecting circuit detects surpassing of said second reference voltage, wherein:

said D.C. output is stopped, when said overvoltage output is asserted.

6. (Original) A D.C. power supply circuit for obtaining a D.C. output by filtering signals that are pulse width-modulated and rectified, said filtering using a filtering circuit, said D.C. power supply comprising:

a diode coupled at an anode side to said filtering circuit and at a cathode side to a load;

a first overvoltage detecting circuit for detecting any surpassing of a load voltage by an attenuated anode side voltage of said diode;

a second overvoltage detecting circuit for detecting any surpassing of a reference voltage by said cathode side voltage of said diode; and

a logic circuit for asserting an overvoltage output when said first overvoltage detecting circuit detects surpassing of said load voltage and second overvoltage detecting circuit detects surpassing of said reference voltage, wherein:

said D.C. output is stopped, when said overvoltage output is asserted.

7. (Original) The D.C. power supply of claim 6 wherein said attenuated anode side voltage is from a voltage divider circuit having said anode side voltage as an input.

8. (Original) An overvoltage circuit in a D.C. power supply, for inhibiting a D.C. output of said D.C. power supply from rising above a prescribed voltage, wherein said D.C. power supply comprises a voltage supplying source coupled to a filter, said overvoltage circuit comprising:

a first overvoltage detecting circuit coupled to an input of said filter;

a second overvoltage detecting circuit coupled to an output of said filter; and

a logic gate coupled to said first overvoltage detecting circuit and said second overvoltage detecting circuit, said logic gate having a gate output for controlling said voltage supplying source.

9. (Original) The overvoltage circuit of claim 8, wherein said voltage supplying source is turned off, when said gate output is asserted due to a first detection of said first overvoltage detecting circuit and a second detection of said second overvoltage detecting circuit.

10. (Original) The overvoltage circuit of claim 9, wherein said first detection occurs, when said first overvoltage detecting circuit detects a first voltage above a first reference voltage and wherein said second detection occurs, when said second overvoltage detecting circuit detects a second voltage above a second reference voltage.

11. (Original) The overvoltage circuit of claim 8, wherein said voltage supplying source comprises a pulse width modulated circuit coupled with a rectifying circuit.

12. (Original) The overvoltage circuit of claim 8, wherein said first overvoltage detecting circuit comprises a low pass filter coupled with a first comparator.

13. (Original) The overvoltage circuit of claim 12, wherein said low pass filter is coupled to said input of said filter and said first comparator is coupled to said logic gate.

14. (Original) The overvoltage circuit of claim 12, wherein said low pass filter comprises a resistor (R) coupled to a capacitor (C).

15. (Original) The overvoltage circuit of claim 8, wherein said second overvoltage detecting circuit comprises a second comparator.

16. (Original) An overvoltage system for N+1 D.C. power supplies supplying a load voltage to a load, said N+1 D.C. power supplies coupled together in parallel, wherein N is an integer, said overvoltage system comprising:

a first power supply of said N+1 D.C. power supplies, comprising:

a plurality of overvoltage detecting circuits in said first power supply, wherein one overvoltage detecting circuit of said plurality of overvoltage detecting circuits compares said load voltage with a reference voltage; and

a logic gate receiving outputs of said plurality of overvoltage detecting circuits for turning off said first power supply when an overvoltage occurs in said first power supply; and

N other power supplies of said N+1 D.C. power supplies, wherein when said first power supply is turned off, said N other power supplies continue to supply power to said load to maintain said load voltage.

17. (Original) A method for stopping operation of a D.C. power supply circuit with an overvoltage, wherein said D.C. power supply circuit is coupled to a load, said method comprising:

determining a first comparison value by comparing an output voltage of said a D.C. power supply circuit to said load with a reference voltage;

determining a second comparison value using at least one voltage internal to said D.C. power supply circuit; evaluating a logic value of said first comparison value logically combined with said second comparison value; and

when said logic value indicates said overvoltage, stopping D.C. power output of said D.C. power supply to said load.

18. (Original) The method of claim 17, wherein when said D.C. power supply circuit is one of a plurality of D.C. power supply circuits supplying D.C. power to said load, and when said D.C. power supply circuit stops supplying power due to an overvoltage, other D.C. power supply circuits of said plurality of D.C. power supply circuits supply D.C. power needed by said load.

19. (Original) The method of claim 18 wherein logically combined is a logical and operation.

20. (Original) The method of claim 17, wherein said D.C. power supply circuit D.C. power supply circuit comprises a pulse width modulation circuit coupled to a rectifying circuit, said rectifying circuit coupled to a filter circuit.

21. (Original) The method of claim 17, wherein said one voltage internal to said D.C. power supply circuit includes an input to said filtering circuit.

22. (Original) The method of claim 17, wherein said one voltage internal to said D.C. power supply circuit includes an output of said filtering circuit.

23. (Original) The method of claim 17 wherein said determining a second comparison value compares said at least one voltage internal to said D.C. power supply circuit to either said load voltage or another reference voltage.

24. (Original) An electronic apparatus, comprising a plurality of D.C. power. supply circuits, each D.C. power supply circuit of said plurality of D.C. power supply circuits for obtaining a D.C. output by filtering a rectified, pulse width-modulated signal, wherein a D.C. power supply circuit of said plurality of D.C. power supply circuits comprises:

a first overvoltage detecting circuit for detecting any surpassing of a first reference voltage by an input of said filtering circuit;

a second overvoltage detecting circuit for detecting any surpassing of a second reference voltage by an output of said filtering circuit; and

a logic circuit for producing an overvoltage state output when said first overvoltage detecting circuit has surpassed said first reference voltage and said second overvoltage detecting circuit has surpassed said second reference voltage, wherein:

said D.C. power supply circuit D.C. output is stopped by said overvoltage state output.

25. (Original) An electronic apparatus, comprising a plurality of D.C. power supply circuits, each D.C. power supply circuit of said plurality of D.C. power supply circuits for obtaining a D.C. output by filtering, a rectified, pulse width-modulated signal, wherein a D.C. power supply circuit of said plurality of D.C. power supply circuits comprises:

a diode, including an input coupled to a filtering circuit of said D.C. power supply circuit and an output coupled to a load;

a first overvoltage detecting circuit for detecting any surpassing of a first reference voltage by an input voltage of said diode;

a second overvoltage detecting circuit for detecting any surpassing of a second reference voltage by an output voltage of said diode; and

a logic circuit for producing an overvoltage state output when said first overvoltage detecting circuit has surpassed said first reference voltage and said second overvoltage detecting circuit has surpassed said second reference voltage, wherein:

said D.C. power supply circuit D.C. output is stopped by said overvoltage state output.

26. (Previously Presented) An overvoltage system for N+m D.C. power supplies supplying a load voltage to a load, said N+m D.C. power supplies coupled together in parallel, wherein N and m are integers, said overvoltage system comprising:

a first power supply of said N+m D.C. power supplies, comprising:

a plurality of overvoltage detecting circuits in said first power supply, wherein one overvoltage detecting circuit of said plurality of overvoltage detecting circuits compares said load voltage with a reference voltage; and

a logic gate receiving outputs of said plurality of overvoltage detecting circuits for turning off said first power supply when an overvoltage occurs in said first power supply; and

N+m-1 other power supplies of said N+m D.C. power supplies, wherein when said first power supply is turned off, said N+m-1 other power supplies continue to supply power to said load to maintain said load voltage.

27. (Previously Presented) An electronic apparatus, comprising a plurality of overvoltage circuits in a D.C. power supply, each overvoltage circuit of said plurality of overvoltage circuits for inhibiting a D.C. output of said D.C. power supply from rising above a prescribed voltage, wherein said D.C. power supply comprises a voltage supplying source coupled to a filter, said overvoltage circuit comprises:

a first overvoltage detecting circuit coupled to an input of said filter;

a second overvoltage detecting circuit coupled to an output of said filter; and

a logic gate coupled to said first overvoltage detecting circuit and said second overvoltage detecting circuit, said logic gate having a gate output for controlling said voltage supplying source.

28. (Previously Presented) An electronic apparatus comprising a plurality of circuits configured to execute the method of claim 1.

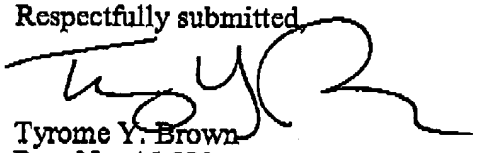
REMARKS/ARGUMENTS

Claims 1-28 are pending and have been allowed. Claim 4 has been amended to correct a typographical error introduced by the Amendment After Allowance Under 37 CFR § 1.312(a) filed on September 22, 2004. No new matter has been added.

Applicants respectfully request that this amendment, filed before payment of the issue fee, be entered. Entry of this amendment is urged since it merely corrects a typographical error, does not touch the merits, and does not require substantial additional work on the part of the Office.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 650-326-2400.

Respectfully submitted,



Tyrome Y. Brown
Reg. No. 46,580

TOWNSEND and TOWNSEND and CREW LLP
Two Embarcadero Center, Eighth Floor
San Francisco, California 94111-3834
Tel: 650-326-2400
Fax: 415-576-0300
Attachments
TYB:asb
60315257 v1